

## FLOORS FOR COTTAGES.

A PRACTICAL plasterer writes as follows:—I have tried most materials for floors, and, as a composition, I think the best and most economical mode for ground floors is to lay, on a hard bottom, clean gravel, sand, lime, and tar, to form a concrete, and to prevent damp from rising: then lay down an inch and half thickness of good cement,—either Blasfield's No. 1 and three of coarse sand, or Atkinson's cement and three of sand, or patent Portland cement and four of clean coarse sand, floated in by a rule on screeds; care being taken to prevent as much as possible the joints from setting, so that it may be one sheet. If the cement set slow, while soft trowel it down, but not when it is setting or it will injure the face. If it set too quick for that, leave it with a rough key, and cover it an eighth thick with fine mortar, and trowel it down gently before it begins to set. If the floor is not likely to be damp, instead of the gravel, &c., pave it with clean hard brick-bats, half an inch apart, and cover it an inch thick only of good cement: this will make a very durable, hard, cheap floor, that will not harbour dirt, wet, nor vermin: when done, it must not be trod on for a few days. As to lime-ash floors,—any lime compositions harden slowly, and don't set hard at once, so that they would not be fit to tread on for a long time; but has lime and metallic sand trowelled a thin coat on a rough coat of good cement, makes a lighter colour and very good floor; or where time is not an object, coarse metallic sand, in proportion of three to one of lime, finished with fine stuff, and well trowelled, makes an excellent floor.

When I saw in THE BUILDER, the desire of "a correspondent" to know how the "lime ash" floors are made, I sent no reply, because I hoped to see a communication from one who had seen them adopted in different counties (which I have not, and could thus compare their respective merits. The directions printed in your last are very clear, but there are two or three matters I would like to add whilst the subject is open. The first is that the sand should be fine, free from small stones, which would be loosened if in the surface of the floor, and, eventually, would quit their resting place. Secondly, in Devonshire (whence I obtained my knowledge of these floors), they mix the lime ash and sand in equal proportions, instead of "two-thirds sand and one-third lime ashes," and I have found it answer admirably. The third observation I will make differs from your correspondent, who states that the mixture is to remain "in a body, for three days." It should rather remain a fortnight (more rather than less), in order that the lime may be thoroughly slaked; for, otherwise the floor "bubbles," and the holes, thus formed, are enlarged in an incredibly short time through moving the various articles of furniture. When once the surface is broken, it crumbles annoyingly; this renders repairs difficult and unsatisfactory, yet it is scarcely worth consideration, except to guard against its necessity, when we reflect that they last without it for so long a period. I have seen floors that have lain for nearly forty years, and they are now without symptoms of decay. We must bear one thing in mind; that the success of the work is almost entirely dependent on the care bestowed in preparing it.

WM. BOUTCHER.

Another correspondent says:—As, in a late number, you invite remarks on the formation of cottage floors, I can recommend to those gentlemen who have plenty of rough timber, and a common circular saw mill on their estates, in cutting their fire-wood, to reserve for wood bricks, of the same width and depth as common bricks, and in longer or shorter lengths, the offal pieces of timber, which might otherwise be thrown into the fuel basket.

They should be properly laid upon a sound foundation of lime, or coal ashes, are cheap, and more comfortable than brick or stone floors, and particularly adapted for children's feet in parish or other schools.

The objection to wood is, its retention of damp after washing.

## VALUE OF EXEMPTION FROM SUPERVISION.

## RAILWAY SHEDS—THEATRE STAIRS.

THE Caledonian Railway Company have lost property to the extent of several thousands of pounds by a fire at the station in Lothian-road, Edinburgh. A spark from the engine (probably) set fire to a truck full of goods, which did the same bad office for the rest of the train. It then communicated to the goods' shed, which was wholly of wood, then to the northward passenger shed, which was of the same material, and then to the southward passenger shed, and this being mainly of iron the destruction was here stopped.

When the recent fatal accident at the Victoria Theatre, London, occurred, it was at first attributed to part of the gallery staircase having given way. We avoided referring to it, however, because this did not seem to be certain, and it would appear from the verdict of the jury (though the statements were any thing but clear) that this was not the case. The jury recommended greater attention to ventilation in similar approaches where large numbers of people may congregate.

Now, whatever may have been the cause of this particular accident, it ought to lead attention to the condition and arrangement of the staircases, lobbies, and modes of exit in several of our theatres, and reconcile parties to the clause in the Buildings Act, giving to the referees control over staircases and passages in public buildings. This clause only applies to new buildings or alterations, and it is really a question whether it ought not to be made to apply to existing structures, and extend to obtaining for the public the means of ready egress. Were it not for the possibility of causing an excitement and perhaps injuring the property of individuals, we could point to some places of amusement and for public meetings where the public assemble under circumstances of the greatest danger.

## RAILWAY JOTTINGS.

The Morning Post announces that the Railway Commissioners "have approved of one amongst a multitude of plans for ensuring the safety of passengers in railway travelling," namely, the formation of "a series of foot-boards and holdfasts along the extent of a train, and by means of which, in the event of accident, the guards may communicate with either engine-drivers or passengers." In so long and so pertinaciously thrusting this desideratum on the notice of all and sundry interested in the public safety, we were encouraged in a series of efforts seconded by none (except through more or less prominent quotations from THE BUILDER itself), by the well grounded assurance that to this result at last it must and would come; and if the recommendation of the Railway Commissioners be now seconded by the companies as it ought to be, we shall find the free transit of the guards to and fro along a train to be a most variously useful and successful means of ensuring one of the great objects for which the press has so long contended, namely, the safety and confidence of the public during railway transit. Then, too, will be the fitting time and opportunity for experiments with those much more varied than original details of plans for summoning the guards to particular carriages,—calls to which then only can they properly respond,—and then too will the name of "guard" itself be for the first time no misnomer.—In the United States a patent has been taken out for an improved mode of warming passenger trains by a combination of flues, connected by elastic and flexible hose with openings and registers in the bottom of the carriages.—Another of those desperate endeavours by which some companies have been striving of late 'to make both ends meet' was lately complained of in the Times, by one of the North-Western clerks. The directors, it seems, intend to reimburse themselves for any defalcations of which the dishonest amongst those comparatively few clerks who finger the company's funds may plunder them, by themselves adopting a system of indiscriminate plunder out of the poor little salary fund of the honest clerks, as it passes through their own directorial fingers. Two-pence to four-pence a pound per

annum off each, or 1,000*l.* to 2,000*l.* in all, is to be the amount of the mulct, whatever be the limit of the defalcation,—only, should there be no defalcation, the directors have generously determined to—withdraw their fingers from the honest clerks' pockets? Oh no! Once there, at any rate, they are not to be at that trouble for nothing; the honest clerks must then pay the penalty exigible for the want of defalcations and dishonest clerks, "by making up the deficiency" out of an incidental penny a pound, which is still to stick to the tarry fingers! Is it credible?—"We pause for a reply." Meantime, however, we may also ask—What has become of that still more noble and hopeful scheme of "the whole railway interest" under which careful "railway servants" were to be mulcted "to the extent of one-fifth of their annual salary," in order to "mitigate the losses" of "sufferers" by accidents arising not even so much from the faults of those careless servants whom the directorial "sufferers" wished to engage on such reasonable security, as from their own.—The second tube at Conway was finally tested, prior to its being opened for traffic, on Wednesday week. The tube in use will be closed for a time, so as to substitute sleepers of iron for the present ones of wood. The entire structures will then consist of 2,600 tons of iron, slung over a span of 400 feet.—Over nearly half an acre, the extensive erections at the Edinburgh station of the Caledonian line have been ravaged by the fire. Twenty carriages, and a great quantity of goods, have been destroyed, as well as the sheds, &c., on the ground.

A project for uniting all the railways round Paris, by a line forming a circle to go from station to station, is mentioned in the French papers. The several companies interested have, it is said, already asked the Government to obtain the assent of the National Assembly to a grant of the necessary aid for the employment of the working classes around the metropolis.

## ELECTRO-TELEGRAPHIC PROGRESS.

The United States men are far a-head of us. President Polk's cumbrous message, says the New York Express, a message containing upwards of 50,000 words (!) was flashed all the way from Baltimore to St. Louis in twenty-four hours, and this, too, with the minutest punctuation marked in the document. Copies were also dropped on the way at York, Harrisburg, Carlisle, Chambersburg, Bedford, and Pittsburgh, in Pennsylvania; Massillon, Cleveland, Zanesville, Columbus, Dayton, and Cincinnati, in Ohio; Madison and Evansville, in Indiana; Louisville, in Kentucky; and Saline, in Illinois. The gentlemen who accomplished this wonderful mental, mechanical, and electrical feat are Messrs. O'Reilly, of the Atlantic and Lake Telegraph Company, and H. J. Rogers, of the American Telegraph Company, who wished to prove beyond all cavil that the lightning line can be made available for the transmission of large documents as well as for short messages.—The various telegraph offices along the line from Cincinnati to Pittsburgh, says the Cincinnati Times, were thrown into some excitement last evening by an incessant and uniform ticking, which occurred in their various registers. It appears that Professors Walker and Locke have connected an astronomical clock with the line in such a manner that its beats were conveyed to Pittsburgh for determining longitude. That a clock going in Cincinnati should tick so loud as to be heard in Pittsburgh or Philadelphia, and along the intermediate line, at one and the same moment, is an item of "natural magic" which a few years ago could scarcely have been predicted.—It has been found at Hull, that, notwithstanding the admission and pressure of sea water which has obtained access to the pipes (once water pipes) used, in crossing under one of the docks there, for enclosing the waterproof-cased wires of the telegraph, not the slightest deflection of the needle has been discovered in experiments instituted with a 72-plate battery.

## BUILDERS' BENEVOLENT INSTITUTION.

—The ball given in aid of the funds of this institution on the 9th, passed off very satisfactorily, much to the credit of the acting members. We were sorry not to see more of the leading builders present.